

**From:** Steeger, Thomas  
**To:** Miller, Robert  
**Subject:** North Carolina Bee Kill Incident Update  
**Date:** Wednesday, April 22, 2020 3:39:06 PM  
**Attachments:** North Carolina Midyear Q1Q2 2020 Bee Summary.docx

---

Bob—attached is the mid-year update on bee kill incident investigations from North Carolina. I inserted the name of the active ingredient (highlighted in yellow) for each formulation listed

Thomas Steeger, Ph.D.  
Senior Science Advisor  
Environmental Fate and Effects Division  
EPA Office of Pesticide Programs  
[steeger.thomas@epa.gov](mailto:steeger.thomas@epa.gov)

## Q1/ Q2 2020 North Carolina Bee Kill Investigations

-001

**2018-015**—Bee kill was first reported on April 27, 2018. NCD&CS Pesticide Inspector Charles Clark and Apiary Inspector Lewis Cauble conducted this investigation. Mr. [Citizen Name / Ex. 6] was concerned that his bees were dying due to being exposed to a pesticide.

Inspectors Clark and Cauble met with [Citizen Name / Ex. 6] at his apiary on April 27, 2018. Mr. Johnson stated that he started to see his bees dying on April 26, 2018.

Inspector Clark next met with several nearby apple orchard owners, who stated that they had made recent pesticide applications. These applications consisted of fungicides and insecticides.

As part of this investigation, Inspector Clark collected samples of dead bees and a pollen sample for laboratory analysis. Laboratory analysis of these samples detected the presence of fluopyram, thiamethoxam, difenoconazole, trifloxystrobin, coumaphos, chlorpyrifos, thiophanate methyl, kresoxim methyl, carbendazim, and chlorantraniliprole in the bees and pollen samples.

Inspector Clark met with [Citizen Name / Ex. 6] who farms an apple orchard near [Citizen Name / Ex. 6] bees. Mr. Lyda made an application of Manzate (mancozeb), Harbour (Streptomycin), and Topsin (thiophanate-methyl)(all fungicides). A record check at a local chemical dealer showed that Mr. Lyda purchased various fungicides and insecticides including Govern 4E (chlorpyrifos)(EPA Reg No. 62719-220-55467). During the inspection, Inspector Clark noted a container of Govern at the mix/load area which was approximately half empty. This product contains chlorpyrifos. Mr. Lyda said he did not apply this product during 2018.

Mr. Lyda's apple orchard contained a large amount of blooming clover, which is attractive to bees. Samples of the clover came back positive for several fungicides and insecticides, including chlorpyrifos.

On January 22, 2020 a Notice of Warning was sent to Mr. Lyda for violating N.C.G.S. §143-443 (b) (3) and N.C.G.S. § 143-456 (a) (2), (4), and (5).

This case has been closed, applicator was cited with using a pesticide in a manner inconsistent with the pesticide label and operating in a faulty, careless, or negligent manner.

-002

**2019-051** – A bee kill was reported on June 17<sup>th</sup>, 2019, by Christopher Dickens, a beekeeper in Mill Spring, NC. Mr. Dickens has thirty-two bee hives and noticed that there were more dead bees than he usually saw in front of his hives. Mr. Dickens contacted Lewis Cauble, an Apiary Inspector with NCD&CS Plant Industry Div. and Mr. Cauble contacted Inspector Travis Snodgrass. Inspectors Snodgrass and Cauble visited Mr. Dickens' hives and Inspector Cauble opened several to inspect any damage. Inspectors Snodgrass and Cauble observed several dead bees and many bees experiencing twitchy movement patterns. Inspector Snodgrass took a sample of the dead bees from Mr. Dickens' hives, in addition to a pollen sample. Mr. Dickens'

also took a sample of dead bees before the Inspector visit. Mr. Dickens' sample was run as a courtesy, but the results did not impact the investigation. After visiting Mr. Dickens' hives, Inspectors Snodgrass and Cauble visited a neighboring beekeeper, but his hives were not affected.

Inspectors Snodgrass and Cauble then visited a nearby orchard, Jerry Lynch Orchard. Inspector Snodgrass noted that the trees in the orchard were not in bloom and that there was not any underbrush for bees to forage below the trees. Inspectors Snodgrass and Cauble also visited Ben Lynch Orchard and noticed a white residue on the clover growing below the orchard trees. Mr. Lynch applied Actara (thiamethoxam), EPA Reg. No. 100-938, to the trees in his orchard on June 15<sup>th</sup>, 2019. Vegetation samples were taken from the clover and the trees in the orchard by Inspector Snodgrass. On June 18<sup>th</sup>, 2019. Inspector Clark met with Larry Keith Laughter who owns another orchard about three miles from Mr. Dickens' beehives. Mr. Laughter had applied Provado (imidacloprid), EPA Reg. No. 264-763, on June 11<sup>th</sup>, 2019. Inspector Clark collected two additional vegetation samples from Mr. Laughter's orchard. Lab analysis of the samples collected for IR:2019-051 have not yet been received.

This case is still open.

-003

**2019-088** – On August 28<sup>th</sup>, 2019, John Converse, a beekeeper in Four Oaks, NC, contacted NCDA&CS Pesticide Section to report a bee kill. Mr. Converse noticed some dead bees in front of his bee hives after an oxalic acid application on August 26<sup>th</sup>, 2019. Inspector Arthur Watkins and Pesticide Operations Specialist Jason Williams conducted the investigation into Mr. Converse's bee kill.

Inspector Watkins and Mr. Williams visited Mr. Converse's property to view his bee hives. Inspector Watkins and Mr. Williams took several samples of dead bees, in addition to pollen samples from the hives. After speaking with Mr. Converse, Inspector Watkins and Mr. Williams visited several nearby farms, including Brain McLamb Orchard, Hilltop Farm Service Center, and Lee Farms. None of the nearby farm sites had applied pesticides to their fields in the past few weeks. After leaving Lee Farms, Inspector Watkins and Mr. Williams noticed a wildflower planting, with some fresh tire marks from a tractor, near the Lee Farms property. Inspector Watkins contacted Doug Lee of Lee Farms, who reported that his brother, Don Lee, tends the wildflower field near his property. Don Lee made an application of Propi-Star EC (propiconazole), EPA Reg # 42750-211, to the field on August 28<sup>th</sup>, 2019. Mr. Lee also reported that he did not clean out the tank entirely and that it's possible that the tank had been contaminated with bifenthrin from a previous application. Lab analysis of the samples collected for IR:2019-088 have not yet been received.

This case is still open.

-004     **2019-093** – A bee kill was reported on September 25<sup>th</sup>, 2019, by Jerry Morgan, a beekeeper in China Grove, NC. Mr. Morgan's home was sprayed for mosquitos without his consent and he contacted NCDA&CS because he was concerned for the health of his bees. Inspector Steve Gatton met with Mr. Morgan and his wife Melissa Morgan at their home to inspect their bee hives. Mr. Gatton contacted Apiary Inspector Georgy Fariss, but Mr. Fariss was not available to inspect the hives until September 26<sup>th</sup>, 2019. Mr. Morgan told Inspector Gatton that when he returned home on September 23<sup>rd</sup>, 2019, he noticed a door hanger with a bill for a mosquito application on his front door. Mr. Morgan also reviewed the security cameras around his home and saw Micah Kelley, an employee of On the Hunt Mosquito Control, making an application to his property. Mr. Morgan contacted Christopher Hunt, owner of On the Hunt Mosquito Control, who informed him that when Mr. Kelley sprayed, he used Bifen I/T (bifenthrin) and avoided the grape vines, fish pond, and bee hives while on site. Inspector Gatton noticed few dead bees while on site, but took a sample of the dead bees he saw for analysis.

After speaking with Mr. & Ms. Morgan, Inspector Gatton met with Mr. Hunt to discuss the application. Mr. Hunt explained that Mr. Kelley is his neighbor and will occasionally help him with routine applications. Mr. Hunt also explained that Mr. Kelley had never sprayed the intended job site and was confused by the GPS directions, ultimately leading him to make an application at the wrong address. Although Mr. Hunt had informed Mr. Morgan that Bifen I/T was used at his home, Mr. Kelley actually applied Talstar P Professional Insecticide, EPA Reg. No. 279-3206. Lab analysis of the samples collected for IR:2019-093 have not yet been received.

This case is still open.

-005     **2020-001** – On January 2, 2020, Jeffery R. Lee, a beekeeper in Bertie county, reported a bee kill near a winter wheat field. Mr. Lee lost 75 of his 80 beehives in the location near the wheat field. Inspector Clay Hudson and Apiary Inspector Adolphus Leonard met with Mr. Lee to discuss his complaint. Mr. Lee first noticed the bee kill on December 29, 2020. Prior to his visit in December 2020, Mr. Lee had not been to the site to visit his hives since September 2019. Mr. Lee told Inspector Hudson that the hives looked healthy in September 2019. Mr. Lee did not make any treatments to the hives but did provide the hives with pollen patties for the winter months.

Inspector Hudson met with Wayland O. Spruill, who farms the wheat field near Mr. Lee's beehives. Mr. Spruill told Inspector Hudson that the seed he planted in the field was untreated, and that the closest treated seed he planted is located three miles away from Mr. Lee's beehives. Mr. Spruill told Inspector Hudson that he applied Roundup PowerMax II (glyphosate) (EPA Reg. No. 524-537) to the field on August 19, 2019. Mr. Spruill applied FreeFall SC (thiadiazuron) EPA Reg. No. 228-653 and Folex6 EC (S,S-St-ributylphosphorotrithionate) (EPA Reg. No. 5481-504) to the field on September 23, 2019. Mr. Spruill also made an application of

Finish6 Pro (ethephon + cyclanilide) (EPA Reg. No. 264-703) and Super Boll (ethephon) (EPA Reg. No. 228-659) to the field on September 30, 2019.

Inspectors Hudson and Leonard collected two pollen samples from the hives as well as one swab sample. Lab analysis of the samples collected for IR:2020-001 have not yet been received.

This case is still open.

-006 **CI-20-003** – On January 21, 2020, Brandon Carter reported the odor of a pesticide around Shipyard Village Apartments in Wilmington, NC. Mr. Carter also reported bees dying in the area. Inspector Jimmy Merritt met with Mr. Carter to discuss his complaint. Mr. Carter is the maintenance technician for Shipyard Village Apartments. Mr. Carter showed Inspector Merritt three dead bees he had in a plastic container. He said he found the bees on the pool deck in the apartment complex in December 2019. Mr. Carter told Inspector Merritt that a landscaping company, Seaside Lawn and Landscaping, may have sprayed the shrubs near the pool with an insecticide that is toxic to bees.

Inspector Merritt met with Shawn Blackmon, owner of Seaside Lawn & Landscaping. Mr. Blackmon told Inspector Merritt that they had applied Ranger Pro Herbicide (glyphosate) (EPA Reg. No 524-517) in the beds near the pool on July 5, 2019. Mr. Blackmon could not provide Inspector Merritt with any application records but did provide him with an invoice of service that detailed the application. Inspector Merritt also met with another employee of Seaside Lawn & Landscaping, Joshua E. Lanier, who told Inspector Merritt he did not apply any pesticides near the pool. Inspector Merritt did not observe any violations and was unable to identify the source that killed the bees.

This case was closed with no action.

-007 **2020-012**- On March 26, 2020, Eric D. Smith reported a bee kill in Ferguson, NC. Mr. Smith had recently purchased bees from another beekeeper and noticed that dead brood were being pushed out from the hive. Inspector Travis Snodgrass and Apiary Inspector Lewis Cauble investigated this complaint. The beekeeper that sold Mr. Smith his bees is located near several nurseries, one of which had recently hired a commercial applicator to spray the property. The applicator sprayed a combination of mineral oil and an insect growth regulator (pyriproxyfen). Inspectors Snodgrass and Cauble took a pollen and larva sample while on site with Mr. Smith. Two samples were also taken from the target area at the nursery that was sprayed with the IGR.

Results for the samples taken have not yet been received from the laboratory.

This case is still open.